

In the Claims:

Below is a listing of all pending claims showing markings according to the USPTO's proposed Revised Amendment Format.

60. (previously added) A retarder stack comprising at least two retarders, wherein a number, retardance and orientation of the retarders are selected so that a first additive primary color spectrum is transmitted from the retarder stack with a first polarization, and a complementary first subtractive primary color spectrum is transmitted from the retarder stack with a second orthogonal polarization.

61. (previously amended) A retarder stack according to claim 60 wherein the first and second polarizations are orthogonal linear polarizations.

62. (previously added) A retarder stack according to claim 60 further comprising a source of at least partially polarized light.

63. (previously added) A light combining device comprising:

a beam combiner adapted to receive a first input beam comprising an additive primary color spectrum with a first polarization and a second input beam comprising a complementary subtractive primary color spectrum with a second polarization and combine these first and second input beams into an intermediate beam comprising the first and second input beams; and

a retarder stack adapted to receive the intermediate beam and transmit a beam of white light with an output polarization state, the retarder stack comprising at least two retarders,

wherein a number, retardance and orientation of the retarders are selected so that the first additive primary color spectrum portion of the intermediate beam is transmitted from the retarder stack with the output polarization state, and the complementary subtractive primary color spectrum portion of the intermediate beam is also transmitted from the retarder stack with the output polarization state.

64. (previously added) A light combining device according to claim 63, further comprising: a polarizing device adapted to receive the output beam and transmit a desired final polarization state.

65. (previously added) A light combining device comprising:

a beam combiner adapted to receive a first input beam comprising a first additive primary color spectrum with a first polarization and a second input beam comprising a second additive primary color spectrum with a second polarization and combine these first and second input beams into an intermediate beam comprising the first and second input beams; and

a retarder stack adapted to receive the intermediate beam and transmit an output beam with an output polarization state, the retarder stack comprising at least two retarders, wherein a number, retardance and orientation of the retarders are selected so that the first additive primary color spectrum portion of the intermediate beam is transmitted from the retarder stack with the output polarization state, and the second additive primary color spectrum portion of the intermediate beam is transmitted from the retarder stack with the output polarization state.

66. (previously added) A light combining device according to claim 65, further comprising:

a polarizing device adapted to receive the output beam and transmit a desired final polarization state.

67. (previously added) A light combining device comprising:

a first beam combiner adapted to receive a first input beam comprising a first additive primary color spectrum with a first polarization and a second input beam comprising a second additive primary color spectrum with a second polarization and combine these first and second input beams into a first intermediate beam comprising the first and second input beams;

a first retarder stack adapted to receive the first intermediate beam and transmit a second intermediate beam with an intermediate polarization state, the retarder stack comprising at least two retarders, wherein a number, retardance and orientation of the retarders are selected so that the first additive primary color spectrum portion of the first intermediate beam is transmitted from the retarder stack with the intermediate polarization state, and the second additive primary color spectrum portion of the first intermediate beam is also transmitted from the retarder stack with the intermediate polarization state;

a second beam combiner adapted to receive the second intermediate beam and a third input beam comprising a third additive primary color spectrum with a third polarization and combine these beams into a third intermediate beam comprising the second intermediate beam and the third input beam;

a second retarder stack adapted to receive the second intermediate beam and transmit an output beam of white light with an output polarization state, the retarder stack comprising at least two retarders, wherein a number, retardance and orientation of the retarders are selected so that

the first, second and third additive primary color spectrum portions are transmitted from the retarder stack with the output polarization state.

68. (previously added) A display apparatus comprising:

a first light source adapted to provide a first input beam comprising an additive primary color spectrum with a first polarization;

a second light source adapted to provide a second input beam comprising a complementary subtractive primary color spectrum with a second polarization;

a beam combiner adapted to receive the first input beam and the second input beam and combine these beams into an intermediate beam comprising the first and second input beams; and

a retarder stack adapted to receive the intermediate beam and transmit a beam of white light with an output polarization state, the retarder stack comprising at least two retarders, wherein a number, retardance and orientation of the retarders are selected so that the first additive primary color spectrum portion of the intermediate beam is transmitted from the retarder stack with the output polarization state, and the complementary subtractive primary color spectrum portion of the intermediate beam is also transmitted from the retarder stack with the output polarization state.

69. (previously added) A display apparatus according to claim 68 further comprising:

a polarizing device adapted to receive the output beam and output a desired final polarization state.

70. (previously added) A display apparatus according to claim 68 wherein the first and second light sources are displays that generate image beams.

71. (previously added) A display apparatus according to claim 68 wherein the beam combiner comprises a polarizing beamsplitter and a dichroic mirror.

72. (previously added) A display apparatus comprising:

a first light source adapted to provide a first input beam comprising an additive primary color spectrum with a first polarization;

a second light source adapted to provide a second input beam comprising an additive primary color spectrum with a second polarization;

a beam combiner adapted to receive the first input beam and the second input beam and combine these beams into an intermediate beam comprising the first and second input beams;

a retarder stack adapted to receive the intermediate beam and transmit an output beam with an output polarization state, the retarder stack comprising at least two retarders, wherein a number, retardance and orientation of the retarders are selected so that the first additive primary color spectrum portion of the intermediate beam is transmitted from the retarder stack with the output polarization state, and the second additive primary color spectrum portion of the intermediate beam is also transmitted from the retarder stack with the output polarization state.

73. (previously added) A display apparatus according to claim 72 further comprising a polarizing device adapted to receive the output beam and output a desired final polarization state.

74. (previously added) A display apparatus according to claim 72 wherein the first and second light sources are displays that generate image beams.

75. (previously added) A display apparatus according to claim 72 wherein the beam combiner comprises a polarizing beamsplitter and a dichroic mirror.

76. (previously added) A display apparatus comprising:

- a first light source adapted to provide a first input beam comprising a first additive primary color spectrum with a first polarization;

- a second light source adapted to provide a second input beam comprising a second additive primary color spectrum with a second polarization;

- a third light source adapted to provide a third input beam comprising a third additive primary color spectrum with a third polarization;

- a first beam combiner adapted to receive the first input beam and the second input beam and combine these beams into an intermediate beam comprising the first and second input beams;

- a first retarder stack adapted to receive the first intermediate beam and transmit a second intermediate beam with an intermediate polarization state, the first retarder stack comprising at least two retarders, wherein a number, retardance and orientation of the retarders are selected so that the first additive primary color spectrum portion of the first intermediate beam is transmitted from the retarder stack with the intermediate polarization state, and the second additive primary color spectrum portion of the first intermediate beam is also transmitted from the retarder stack with the intermediate polarization state;

a second beam combiner adapted to receive the second intermediate beam and the third input beam and combine these beams into a third intermediate beam comprising the second intermediate beam and the third input beam;

a second retarder stack adapted to receive the second intermediate beam and transmit an output beam of white light with an output polarization state, the retarder stack comprising at least two retarders, wherein a number, retardance and orientation of the retarders are selected so that the first, second and third additive primary color spectrum portions are transmitted from the retarder stack with the output polarization state.

77. (previously added) A display apparatus according to claim 76 wherein the first, second and third light sources are displays that generate image beams.

78. (previously added) A display apparatus according to claim 76 wherein the first and second beam combiners comprise a polarizing beamsplitter and a dichroic mirror.

79. (previously added) A display apparatus comprising:

a first retarder stack adapted to receive a white light beam and transmit a first intermediate beam, the first retarder stack comprising at least two retarders, wherein a number, retardance and orientation of the retarders are selected so that a first additive primary color spectrum portion of the first intermediate beam is transmitted from the retarder stack with a first polarization and a complementary first subtractive primary color spectrum of the first intermediate beam is transmitted from the retarder stack with a second polarization,

a first beam splitter adapted to divide the first intermediate beam into a first output beam comprising the first additive primary color spectrum portion and a second intermediate beam comprising the complementary first subtractive primary color spectrum of the first intermediate beam;

a second retarder stack adapted to receive the second intermediate beam and transmit a third intermediate beam, the first retarder stack comprising at least two retarders, wherein a number, retardance and orientation of the retarders are selected so that a second additive primary color spectrum portion of the third intermediate beam is transmitted from the retarder stack with a third polarization and a third additive primary color spectrum of the second intermediate beam is transmitted from the retarder stack with a fourth polarization;

a second beam splitter adapted to divide the third intermediate beam into a second output beam comprising the second additive primary color spectrum portion and a third output beam comprising the third additive primary color spectrum.

80. (previously added) A display apparatus according to claim 79 further comprising a polarizing device adapted to receive unpolarized white light and output a white light beam with an input polarization.

81. (previously added) A display apparatus according to claim 79 further comprising a white light source adapted to provide a white light beam.

82. (previously added) A display apparatus according to claim 79 wherein the white light beam depicts an image to be displayed.

83. (previously added) A display apparatus according to claim 79 wherein the first and second beam splitters comprise a polarizing beamsplitter and a dichroic mirror.

84. (previously amended) A display apparatus comprising:

a retarder stack adapted to receive a white light beam and transmit an intermediate light beam, the retarder stack comprising at least two retarders, wherein a number, retardance and orientation of the retarders are selected so that a first additive primary color spectrum of the intermediate light beam is transmitted from the retarder stack with a first polarization, and a complementary first subtractive primary color spectrum is transmitted from the retarder stack with a second orthogonal polarization; and

a beam splitter adapted to divide the intermediate beam into a first output beam comprising the first additive primary color spectrum portion and a second output beam comprising the complementary first subtractive primary color spectrum of the intermediate beam.

85. (previously added) A display apparatus according to claim 84 further comprising a white light source adapted to provide a white light beam.

86. (previously added) A display apparatus according to claim 85 wherein the white light beam depicts an image to be displayed.

Serial No. 09/736,135

Attorney Docket No. 95121961.114002RCE

87. (previously added) A display apparatus according to claim 84 wherein the first and second polarizations are orthogonal linear polarizations.